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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/485,074	09/27/2000	Christian Lauble	10537/68	1448

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EXAMINER
BURCH, MELODY M

ART UNIT	PAPER NUMBER
3683	

DATE MAILED: 06/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Offic Action Summary	Application No.	Applicant(s)	
	09/485,074	LAUBLE ET AL.	
	Examiner	Art Unit	
	Melody M. Burch	3683	

-- The MAILING DATE of this communication appears on the cover sheet with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 May 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 May 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 9, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent EP-0748949 to Hofmann et al. (using US Patent 5704597 to Hofmann et al. as an English equivalent).

Re: claim 9. Hofmann et al. show in figure 1 a vibration damper capable of being used for a tubular propeller shaft in the drive train of a motor vehicle, the vibration damper comprising: a sleeve 11 the sleeve defining a radial and circumferential direction, a mass body 12 mounted concentrically in the sleeve, a plurality of spring elements 17a,17b for mounting the mass body to the sleeve, and a plurality of flexible stop elements top and bottom elements 21 disposed circumferentially between the spring elements and disposed between the mass body and the sleeve to define a discrete space 13 to limit a vibration travel of the mass body at least in the radial direction, wherein the stop elements extend over a larger circumferential angle than the spring elements and occupy a large portion of a space between the mass body, the spring elements and the sleeve as shown in figure 1, but does not specifically disclose that the spring elements are rubber. Hofmann et al. teach in figures 2 and 3 the spring elements and the stop elements being shown with the same cross-hatching and

discloses in line 6 of the abstract the stop elements being composed of rubber. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the spring elements of Hofmann et al. to have been made of rubber, in view of the teachings of Hofmann et al., in order to provide good shock absorbing properties.

Re: claim 15. Hofmann et al. show in figure 3 the limitation wherein the sleeve further defines an axial direction and wherein the mass body is mounted axially between at least two of the plurality of spring elements and the sleeve fits axially around the mass body as shown in figure 3.

Re: claim 16. Hofmann et al. show in figure 1 the limitation wherein the sleeve includes a tubular segment having two sides – one side shown above the bolts 25a,b and the other side shown below the bolts and two end faces shown in the areas of the lines associated with element numbers 25a and 25b, planar, disk-shaped regions being included at both end faces as shown, the plurality of spring elements being attached to the disk-shaped regions.

3. Claims 9-12 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB-1341087 in view of Hori.

Re: claims 9-12 and 17-20. GB-1341087 shows in figure 1 a vibration damper capable of being used for a tubular propeller shaft in the drive train of a motor vehicle, the vibration damper comprising: a sleeve 10 the sleeve defining a radial and circumferential direction, a mass body 14,19 mounted concentrically in the sleeve, a plurality of elastic spring elements 16 for mounting the mass body to the sleeve, and a

plurality of flexible stop elements 17 disposed circumferentially between the spring elements and disposed between the mass body and the sleeve to define a discrete space 20 to limit a vibration travel of the mass body at least in the radial direction and occupying a large portion of space between the mass body, the spring elements and the sleeve, but does not specifically disclose the limitation of the elastic spring elements being composed of rubber and does not disclose the limitation wherein the stop elements extend over a larger circumferential angle than the spring elements.

Hori teaches in col. 1 lines 21-23 the use of the elastic members of a vibration damper being composed of rubber. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the elastic spring elements of the vibration damper of GB-1341087 to have been composed of rubber or any suitable elastic material, as taught by Hori, in order to provide good shock absorbing properties.

Hori teaches in figure 1 the limitation wherein the stop elements 32,34 extend over a larger circumferential angle than the spring elements 16 shown in the area of element numbers 16, 24, 25, and 27. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the stop elements and spring elements of GB-1341087 to have included stop elements extending over a larger circumferential angle than the spring elements, as taught by Hori, in order to provide more radial flexibility in the damper since the stops are spaced a distance away from one of the sleeve and the mass body.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over GB-1341087 in view of Hori as applied to claim 9 above, and further in view of Shimazaki et al. Shimazaki et al. teach the use of a propeller shaft 21,211 mounted concentrically with a sleeve 132,134 wherein the sleeve includes a first 132 and second 134 tube segment joined together, the first tube segment having a greater outside diameter than an outside diameter of the second tube segment and corresponding approximately to an inside diameter of the propeller shaft 21,211, the second tube segment 134 carrying on an outer contour of the mass body 131, a least a portion of the plurality of spring elements 133 connecting the second tube segment 134 to the mass body 131, the mass body being annular at least in an area of connection with the second tube segment. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the vibration damper of GB-1341087 to include a propeller shaft concentric with the sleeve, as taught by Shimazaki et al., in order to provide a means of connecting the sleeve to a drive train of a motor vehicle.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the sleeve of GB-1341087 to include two tube segments of different diameters joined together and arranged, as taught by Shimazaki et al., in order to provide reinforced structural integrity between the propeller shaft and the mass body during the course of the vibration travel.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over GB-1341087 in view of Hori as applied to claim 11, and further in view of FR-2720132.

Re: claim 13. FR-2720132 teaches in figure 6 the limitation wherein a sleeve 1 includes an undulating longitudinal profile having troughs (shown on either side of elements 11), spring elements 3 being arranged at the troughs and at least a portion of the troughs serving as at least a portion of the stop elements. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the damper of GB-1341087 to have included a sleeve including an undulating longitudinal profile, as taught by FR-2720132, in order to provide and stop element means or peaks 11 adjacent to the troughs integrally formed within the sleeve which provide stopping functions in addition to the stop elements 17 of GB-1341087.

Response to Arguments

6. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent 4889578 to Kei et al., 4486183 to Posiviata et al., 5918864 to Schafer, and foreign patents: DE9112268, DE-3632418, and EP-0795697 teach similar vibration damper inventions, US Patent 3403899 to Plume teaches the use of a mass body 4,18 being axially mounted between two elastic spring elements 8 and 6.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

9. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

mmb 5/30/02
mmb
May 30, 2002

JACK LAVINDER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

5/30/02